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ORIGINAL ARTICLE

Sexual problems in elderly male and female patients with heart failure

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8 August 2012**ABSTRACT****Objectives** To investigate perceived sexual problems in a large group of younger and older patients with heart failure (HF), with and without a partner, focusing on a broad range of perceived sexual problems, and compare this with a sample of healthy community-dwelling elderly people.**Design** Cross-sectional study.**Setting** 17 HF clinics and general practices in The Netherlands.**Participants** 438 patients with HF and 459 healthy community-dwelling elderly people.**Main Outcome Measures** Differences in sexual functioning, related factors and perceived causes of sexual problems between patients with HF and healthy community controls.**Results** In total, 59% of HF patients reported sexual problems, mostly problems with erectile function. HF patients with a partner (67%) and younger patients (65%) reported significantly more sexual problems than healthy community controls (58%, $p=0.011$ and 53%, $p=0.011$, respectively). Multivariate analyses show that sexual problems in HF patients with a partner were more common in men (OR 2.73, 95% CI 1.572 to 4.753) and in those with a prescription of β -blockers (OR 2.00, 95% CI 1.10 to 3.586). In younger patients, sexual problems were independently associated with male gender (OR 3.21, 95% CI 2.099 to 4.908) and having a partner (OR 2.00, 95% CI 1.283 to 3.110). HF patients mainly attribute their sexual problems to symptoms of HF.**Conclusion** Sexual problems are common in patients with HF, particularly in younger patients and those with a partner. As patients attribute their sexual problems mostly to HF symptoms, adequate treatment and education of HF patients is needed.**INTRODUCTION**Sexuality is a relevant component of quality of life, irrespective of a chronic condition such as heart failure (HF). Consequences of symptoms, treatment or psychological burden from being chronically ill or having a cardiac disease influence the quality of life of patients, and can affect sexual performance or cause sexual problems.¹ Symptoms of dyspnoea and fatigue may hinder the possibility of being active, and chest pain might cause patients to feel anxious during sexual activity.² Patients and their partners might fear deterioration as a result of sexual activity and death during intercourse.³ Decreased frequency of sex, less satisfaction andloss of sexual interest were reported in HF patients at 3 and 9 months after a hospital admission.⁴In earlier small studies sexual function of HF patients was studied in relatively young, married and predominantly male patients, mainly addressing the prevalence of erectile dysfunction and possibilities for treatment.^{5–8} We recently reported that impaired sexuality is reported in approximately 50% of both male and female HF patients, as well as patients with and without a partner.⁹ Considering the demographic characteristics of HF patients in daily practice, in which 50% are women and 30–50% are living alone,^{10–12} more in-depth information is needed on the problems of both female and male patients and patients with or without a partner.At the same time it is known that there are age-related changes in sexuality caused by normal hormonal changes, vascular damage, or muscular weakness that are independent of HF,¹³ so it should be recognised that sexual problems might be part of the ageing process, and not only be caused by HF. To contribute further to research on this subject, it is therefore important to have insight into the nature and cause of sexual problems of HF patients compared to healthy community-dwelling elderly people.

To get a clinically relevant perspective on the sexual problems of patients with HF, we aimed to study differences in sexual functioning, perceived causes and related factors of sexual problems between HF patients and healthy community controls, both older and younger, and with and without a partner.

METHODSThe present study has a descriptive cross-sectional design. The sample consisted of HF patients who completed the follow-up of the Coordinating Study Evaluating Outcomes of Advising and Counselling in Heart Failure (COACH) and a reference group of healthy community controls.^{14 15}**Study population****Heart failure population**

All patients were previously enrolled in the COACH study, a Dutch multicentre, randomised, controlled trial evaluating the effect of education and support in HF patients. Patients were included in the study during a hospitalisation for HF (New York Heart Association functional class II–IV), with HF as the primary diagnosis. Patients were

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followed during 18 months in which data on readmission and mortality were collected. During the last interview, 18 months after inclusion, 751 patients were alive and asked if they were willing to complete a questionnaire on sexual function at a later time point, and return it in a pre-stamped envelope. The Central Ethics Committee approved the study protocol and the amendment of the additional questionnaire on sexual function (METc 2002/047: Amendement 3). All patients provided informed consent. The study was performed in accordance with the principles outlined in the Declaration of Helsinki.^{14 15}

Healthy community controls

Nine local district council offices in different areas in The Netherlands were asked for a random sample of addresses of 500–1000 people of at least 55 years of age who were not living at the same address. Between July and August 2005, 5500 questionnaires were distributed accompanied by a letter in which the individuals were invited to complete the questionnaire, and return it in a pre-stamped envelope. Anonymity and confidentiality was guaranteed. Participants rated their health on a self-reported questionnaire on 19 active medical problems. From the 2512 elderly people, 1695 (67%) answered the questions on sexual function. Of these, 459 (27%) reported no health problems, and were selected for our comparison.

Study measures

Sexual problems

All participants were asked if they had problems with regard to interest, arousal, erection, vaginal dryness, orgasm or other problems. When answering affirmative to one or more of these questions they were considered as having sexual problems. Seven additional questions were added to describe the perceived cause of their sexual problems: shortness of breath, fatigue, pain, anxiety, anxiety of the partner, medication and limited circulation. All additional questions were dichotomous with yes/no answer categories. The content, wording and validity of the questions were assessed by healthcare professionals, researchers and five patients with HF.

Importance and satisfaction with sex

All participants were asked to rate the importance and satisfaction with their sexual activity at this particular moment on a visual analogue scale ranging from 0 to 10 (0, very unimportant to 10, very important). Patients were also asked to rate the importance and satisfaction before their HF was diagnosed.

Sexual adjustment

Patients with HF completed the sexual adjustment subscale (SAS) of the psychosocial adjustment to illness scale.¹⁶ This subscale has been used in previous studies in HF patients, describing shifts in the quality of sexual relations due to the current illness or treatment, and is composed of six items: change in sexual interest since illness; change in frequency of sexual activity; change in satisfaction; problems with sexual performance; arguments related to sex; problems with spouses. Each item has a scoring range of 0–3. For the SAS the total score ranges from 0 to 18. Low scores reflect good adjustment, whereas high scores indicate poor adjustment. The validity and reliability of the instrument has been established in a variety of clinical populations. The internal consistency of the subscales is acceptable with Cronbach alphas ranging from 0.74 to 0.80 in HF patients.^{4 17} Due to the orientation on adaptation to disease, the SAS was not administered to the community controls.

Demographic and clinical characteristics

Data on demographic and clinical characteristics were collected from chart review, interviews and questionnaires. Depressive symptoms were measured with the Center for Epidemiological Studies depression scale (CES-D). A total sum score is used (0–60), with higher scores indicating more depressive symptoms.^{18 19}

Statistical analyses

Descriptive statistics were used to characterise both samples. For continuous variables means and standard deviations and for categorical variables, frequencies with percentages were used. Differences on sexual problems and importance and satisfaction with sexuality between community controls and patients with HF were tested by χ^2 tests and an independent sample t test. Importance and satisfaction with sexuality in patients with HF now and before HF was tested with a paired samples t test.

Differences in demographic and clinical characteristics between patients with and without sexual problems were univariate tested with independent sample t tests and χ^2 tests. A multivariable logistic regression analysis was performed to define the independent association between sexual problems and demographic and clinical characteristics. The multivariate model was built by entering those variables that had a univariate $p < 0.15$, and retaining those variables with $p < 0.05$ in the final model. As previous studies showed that age and having a partner is associated with sexual problems, in order to gain more insight into sexual problems, we performed analyses independently for respondents of 65 years and younger and older than 65 years, and for respondents with or without a partner. The cut-off age of 65 years was decided on based on the mean age of both the patient and healthy community control groups. Sixty-five years was about the median of the four values, and the value in which all groups still consisted of a considerable number of respondents for statistical analyses. Having a partner was defined as 'married—living together', 'not married—living together' and 'having a partner—not living together'. Furthermore, in the total group the interaction between age and having a partner was included in the model.

RESULTS

Patient characteristics

In total, 438 patients of the 751 HF patients (59%) returned completed questionnaires on sexual function. Patients who returned the questionnaires were slightly younger compared to those who did not return the questionnaires (68 ± 12 vs 71 ± 11 , $p = 0.001$), were more often living with a partner (68% vs 53%, $p < 0.001$) and were more often in an intervention arm of the COACH study (care as usual 29% vs 37%, basic intervention 34% vs 33%, intensive intervention 38% vs 31%, $p = 0.039$). No differences were found with regard to gender.

Of the 438 patients, 68% (298) had a partner. The mean age was 68 years (± 12), and 62% were men. Patients had a mean left ventricular ejection fraction of 33% (± 14) and were prescribed the standard HF medications; 74% of patients were prescribed a β -blocker at the time of this study (table 1).

Of the 459 healthy community controls, 87% (401) had a partner, with a mean age of 64 years (± 7), and 67% were men. In total, 13% of healthy controls ($n = 58$) did not have a partner; these had a mean age of 65 years (± 8), and 55% were men.

Sexual problems

In total, 59% of the patients reported problems with sexual function, compared to 56% of the healthy community controls

Table 1 Patient characteristics†

	Total group (n=438)	With a partner (n=298)	Without a partner (n=140)	65 Years and younger (n=155)	Older than 65 years (n=283)
Age, mean (SD), years	68 (12)	67 (12)	72 (13)*	55 (9)	76 (6)***
Male	270 (62)	216 (73)	54 (39)***	100 (65)	170 (60)
Intervention group					
Care as usual	125 (29)	81 (27)	44 (31)	38 (25)	87 (31)
Basic intervention	148 (34)	102 (34)	46 (33)	55 (35)	93 (33)
Intensive intervention	165 (38)	115 (39)	50 (36)	62 (40)	103 (36)
Length of relationship, mean (SD), years	38 (14)	38 (14)	—	27 (12)	45 (11)***
NYHA III–IV at 18 months	127 (32)	85 (31)	42 (33)	33 (23)	94 (36)*
LVEF, mean (SD), %	33 (14)	32 (14)	33 (14)	30 (14)	34 (14)*
Ischaemic HF	168 (38)	123 (41)	45 (32)	38 (25)	130 (46)***
Stroke	37 (8)	22 (7)	15 (11)	5 (3)	32 (11)*
COPD	103 (24)	67 (23)	36 (26)	24 (16)	79 (28)*
Diabetes	94 (22)	63 (21)	31 (22)	33 (21)	61 (22)
ACE/ARB	354 (81)	242 (81)	112 (80)	133 (86)	221 (78)
β-Blocker	305 (74)	218 (77)	87 (68)*	111 (77)	194 (73)
Diuretics‡	384 (94)	266 (94)	118 (92)	130 (90)	254 (96)*
Lipid-lowering drugs	187 (46)	134 (48)	53 (41)	61 (42)	126 (47)
CES-D score, mean (SD)	11 (9)	11 (9)	11 (9)	11 (10)	11 (9)
With partner	298 (68)	—	—	116 (75)	182 (64)*
Older than 65 years	383 (65)	182 (61)	101 (72)*	—	—

*p<0.05, *** p<0.001.

†Data are presented as number (%) of participants unless otherwise indicated.

‡Loop diuretics, thiazides and aldosterone-antagonists.

ACE/ARB, ACE inhibitor or angiotensin receptor blocker; CES-D, Center for Epidemiological Studies depression scale; COPD, chronic obstructive pulmonary disease; HF, heart failure; LVEF, left ventricular ejection fraction; NYHA, New York Heart Association functional class.

(table 2). Patients reporting sexual problems were younger (67 vs 70 years, $p=0.025$), were more often men (75% vs 43%, $p<0.001$), were diagnosed with ischaemic HF (44% vs 31%, $p=0.006$), had a partner (77% vs 55%, $p<0.001$) and more often had a prescription of β-blockers (80% vs 66%, $p=0.002$) and lipid-lowering drugs (51% vs 37%, $p=0.007$). In multivariate analyses, variables that were independently related to reporting sexual problems were male gender, a prescription of β-blockers and having a partner. The interaction of age and having

a partner was not significant related to reporting problems (table 3).

Sexual problems in younger and older respondents

Patients who were 65 years and younger reported significantly more sexual problems compared to healthy controls of the same age category, this was not found in patients older than 65 years compared to healthy controls. Younger male patients more often reported problems with erectile function than the healthy

Table 2 Problems and attributed causes in HF patients and community controls†

	Total group (n=897)		With a partner (n=699)		Without a partner (n=198)		65 Years and younger (n=453‡)		Older than 65 years (n=439‡)	
	Community controls (n=459)	HF patients (n=438)	Community controls (n=401)	HF patients (n=298)	Community controls (n=58)	HF patients (n=140)	Community controls (n=298)	HF patients (n=155)	Community controls (n=156)	HF patients (n=283)
Problems in sexual function	259 (56)	259 (59)	231 (58)*	200 (67)	28 (48)	59 (42)	157 (53)*	101 (65)	99 (64)	158 (56)
No interest in sex	53 (12)	56 (13)	47 (12)	40 (13)	6 (10)	16 (11)	28 (9)	19 (12)	23 (15)	37 (13)
No sexual arousal	47 (10)	50 (11)	41 (10)	38 (13)	6 (10)	12 (9)	29 (10)	21 (14)	18 (12)	29 (10)
Problems with erection (men)	52 (17)***	101 (37)	46 (17)***	83 (38)	6 (19)	18 (33)	19 (10)***	39 (39)	33 (30)	62 (37)
Problems with vaginal lubrication (women)	50 (31)***	10 (6)	45 (34)***	10 (12)	5 (19)***	0 (0)	36 (33)*	5 (9)	14 (30)***	5 (4)
Problems with orgasm	36 (8)	41 (9)	35 (9)	34 (11)	1 (2)	7 (5)	16 (5)	14 (9)	19 (12)	27 (10)
Other problems	57 (12)	42 (10)	50 (13)	28 (9)	7 (12)	14 (10)	44 (15)	20 (13)	13 (8)	22 (8)
Causes of changes in sexual function										
Shortness of breath	2 (0)*	86 (20)	2 (1)***	68 (23)	0 (0)*	18 (13)	1 (0)***	32 (21)	1 (1)***	54 (19)
Fatigue	37 (8)***	87 (20)	35 (9)***	75 (25)	2 (3)	12 (9)	22 (7)***	44 (28)	15 (10)	43 (15)
Pain	20 (4)	13 (3)	18 (5)	10 (3)	2 (3)	3 (2)	12 (4)	5 (3)	8 (5)	8 (3)
My anxiety	21 (5)	26 (6)	18 (5)	22 (7)	3 (5)	4 (3)	8 (3)*	16 (10)	13 (8)*	10 (4)
Anxiety of my partner	23 (5)	13 (3)	23 (6)	13 (4)	—	—	13 (4)	6 (4)	11 (7)*	7 (3)
Medication	9 (2)***	43 (10)	8 (2)***	37 (12)	1 (2)	6 (4)	3 (1)***	22 (14)	6 (4)	21 (7)
Limited circulation	26 (6)*	48 (11)	24 (6)**	42 (14)	2 (3)	6 (4)	16 (5)*	18 (12)	10 (6)	30 (11)

*p<0.05, ***p<0.001.

†Data are presented as number (%) of participants.

‡Missing data on age of five community controls.

HF, heart failure.

Heart failure

Table 3 Multivariate analyses problems in sexual function of HF patients

Variables	B (SE)	OR (95% CI)	p Value
Total group (n=438)			
Male	1.4 (0.2)	3.93 (2.50 to 6.18)	<0.001
β-Blocker at 18 months	0.7 (0.3)	2.05 (1.26 to 3.33)	0.004
Having a partner	0.6 (0.2)	1.73 (1.08 to 2.78)	0.02
Patients with a partner (n=298)			
Male	1.0 (0.3)	2.73 (1.57 to 4.75)	<0.001
β-Blocker at 18 months	0.7 (0.3)	1.99 (1.10 to 3.59)	0.02
Patients without a partner (n=140)			
Male	2.0 (0.5)	7.37 (3.05 to 17.79)	<0.001
Ischaemic HF	1.4 (0.5)	3.99 (1.54 to 10.34)	0.004
β-Blocker at 18 months	1.1 (0.03)	3.12 (1.18 to 8.24)	0.02
CES-D score	-2.9 (0.7)	1.05 (1.00 to 1.11)	0.04
Patients 65 years and younger (n=155)			
Male	1.2 (0.2)	3.21 (2.10 to 4.91)	<0.001
Having a partner	0.7 (0.2)	2.00 (1.28 to 3.11)	0.002
Patients older than 65 years (n=283)			
Male	1.6 (0.3)	5.18 (3.00 to 8.96)	<0.001
β-Blocker at 18 months	1.0 (0.3)	2.60 (1.43 to 4.73)	0.002

CES-D, Center for Epidemiological Studies depression scale; HF, heart failure.

controls. However, in both the younger and older respondents female patients less often reported problems with vaginal lubrication than female controls (table 2).

Independent of age category, patients rated the importance and their current satisfaction of sexuality lower than before their disease and lower than healthy community controls. All patients did perceive sexuality as less important, and were less satisfied with their current sexuality than before their HF (figure 1).

Younger patients had a mean total score of 6.0 and older patients a score of 7.5 on the SAS, with higher scores reflecting more perceived problems. Most problems, both in younger and older patients, were found on the items related to the change in the frequency of sexual activity, and the least problems on describing arguments with their spouses related to their sexual relationship. Shortness of breath and anxiety were reported

more often as the cause of sexual problems in both younger and older patients compared to healthy controls. Younger patients also reported fatigue, medication and limited circulation more often to be the cause of their problems, unlike the older patients, who more often reported their partners' anxiety to be the cause of their problems compared to the healthy community controls of the same age category (table 2).

Different associations were found between sexual problems in younger and older patients. In younger patients male gender and having a partner were independently associated with problems in sexual functioning. In older patients male gender and a prescription of β-blockers were independently associated with sexual problems (table 3).

Sexual problems in respondents with and without partner

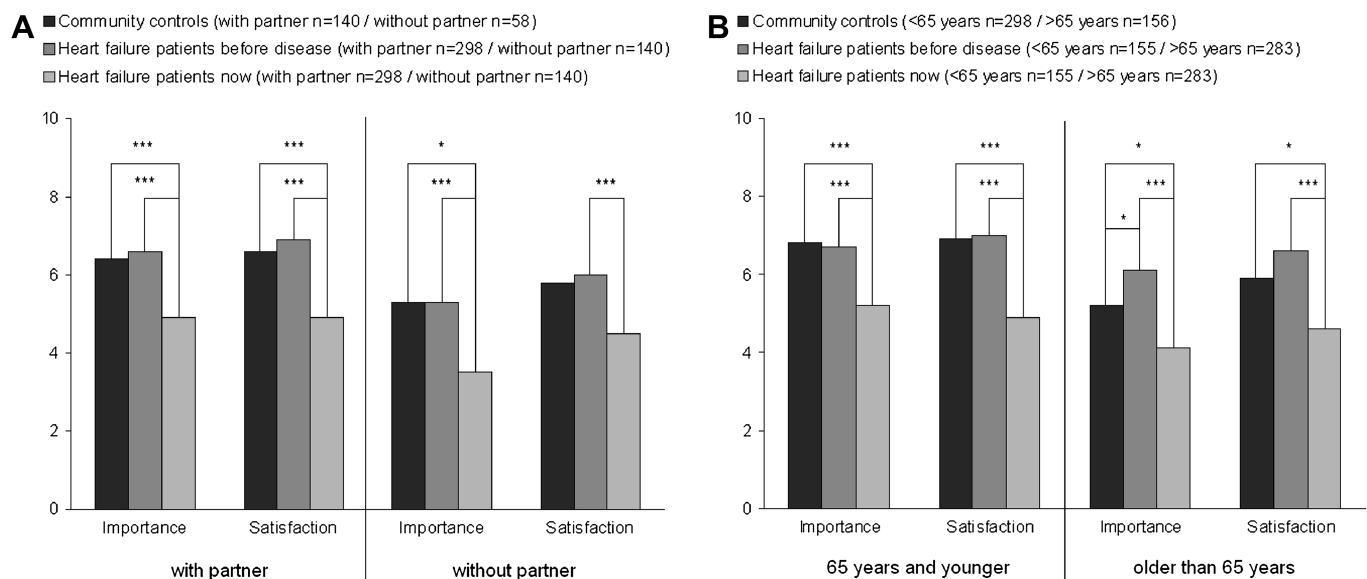
Patients with a partner significantly more often perceived sexual problems compared to healthy controls. Patients without a partner did not report more sexual problems than the healthy controls without a partner. In respondents with a partner, male patients reported significantly more problems with erectile function than healthy controls (table 2).

Patients had a mean total score on the SAS of 6.8. No differences were found between patients with or without a partner. Shortness of breath was more often reported as the cause of sexual problems in patients than healthy controls, independent of having a partner (table 2).

Different associations were found between sexual problems in patients with or without a partner. In patients with a partner male gender and a prescription of β-blockers were independently associated with problems in sexual functioning. In patients without a partner male gender, ischaemic HF, a prescription of β-blockers and a higher score on the CES-D were independently associated with sexual problems (table 3).

DISCUSSION

Our results show that sexual problems are common in patients with HF. Considering these problems in the total population of patients, without taking age or marital status into account; these problems are comparable with healthy community

**Figure 1** Importance and satisfaction with sexual activity of community controls and heart failure patients. * $p < 0.05$, *** $p < 0.001$. (A) Respondents with and without a partner. (B) Respondents younger and older than 65 years.

controls. However, when looking specifically at participants with and without a partner, and older and younger participants, HF patients with a partner and younger patients reported a significant reduction in their satisfaction with sexuality, and perceived more sexual problems compared to healthy community controls. In younger patients male gender and having a partner were independently associated with problems in sexual functioning. In patients with a partner male gender and having a prescription for β -blockers were associated with sexual problems. Based on previous studies, we expected more reported sexual problems in the HF population. This was not the case. A possible explanation could be that these studies predominantly focused on younger male patients and patients with a partner.^{5–8} Our total study sample also included older female patients and patients without a partner. Our results show that a large percentage of these patients do report sexual problems; however, it did not differ significantly from the healthy community controls.

This is the first study with a considerable patient sample that examined specific and in-depth sexual problems in HF patients compared to healthy community controls. It is known that changes in sexuality might be part of the ageing process (hormonal changes, vascular damage, or muscular weakness) and are not only caused by HF.¹³ In order to gain more insight into age-related sexual problems, we chose to analyse data separately for respondents older and younger than 65 years. Our study is also unique in the sense that we chose to include male and female patients and patients both with and without a partner. Of course, we realise that having a partner is strongly associated with the perception of sexual problems, as patients who have a partner can be expected to be confronted more often with those problems as part of their daily life.²⁰ Therefore, we analysed participants with and without a partner separately.

Patients and their partners might worry about sexual problems. Our study confirmed previous reports of the higher prevalence of erection problems in cardiac patients compared to a non-cardiac population.²¹ A decreased frequency and decreased interest were reported by patients as result of their HF. Although more male patients perceive sexual problems, we also found a large number of women (25% of the total group) reporting sexual problems, suggesting that the main focus on men in research regarding sexual problems in cardiovascular disease does not seem appropriate.²² In general, HF symptoms like dyspnoea, fatigue and exercise intolerance can be assumed to affect sexuality in both male and female patients. This seems to be confirmed by our results, which show that all patients attribute their sexual problems to their HF symptoms, and therefore it is important to address the possible influence of HF and HF medication in patient education and treatment. In particular, the attribution of sexual problems to medication can lead to non-compliance with the treatment regimen. In our study female patients also reported problems with arousal, interest and orgasms. Only a minority of the female patients reported problems with vaginal lubrication, which was significantly less often reported compared to healthy controls.

We found an independent relationship between prescriptions of β -blockers and sexual problems in patients with and without a partner, and also in older patients. Until now results from studies addressing the relationship between β -blocker use and sexual problems are incongruent.^{23–24} Animal studies have reported that β -blockers such as propranolol may induce erectile dysfunction through central and peripheral (genital) effects as it increases the latency to ex copula ejaculation, the latency to initial erection, and reduces the number of erectile reflexes.²⁵

However, Silvestri *et al*²⁴ suggest that reports of erectile dysfunction in patients receiving β -blockers may be mostly psychological in origin as it is more frequent in patients knowing the side effect of the drug, and it is reversed in the majority of cases by placebo.

Despite earlier hypothesising about the possible anxiety of patients affecting the return to sexual activity, only 6% of the HF patients described their own anxiety, and 3% the anxiety of their partner as a reason for sexual problems.² Depressive symptoms are known to be related to sexual problems,^{26–27} and we found that patients with sexual problems had higher CES-D scores, and depressive symptoms were independently related to sexual problems in patients without a partner.

Furthermore, it is interesting to note that HF patients rated the importance and satisfaction with their current sexuality significantly lower than before their disease. Looking back on their sex life before their HF the importance and satisfaction with sexuality was the same as the community controls. However, patients perceive sexuality as less important, and were less satisfied with current sexuality (eg, having diagnosed HF) than community controls. This possibly reflects the adaptation of priorities and expectations in life when living with a chronic disease.²⁸

Several limitations of this study should be considered. First, the list of characteristics of the community controls was limited, and only included age, gender, having a partner and the presence of medical problems. Given the age group, a high percentage of morbidity would be expected, with sexual problems as a possible consequence. Therefore, in order to make a representative comparison, community controls who reported health problems were excluded from our analyses. A second limitation of this study is the response to the survey, which was 59%. Although this is an acceptable response, and comparable to other surveys, this needs to be taken into account because it is reasonable that patients with problems were more motivated to return the questionnaires. On the contrary, it can be imagined that patients have some reluctance in reporting sexual problems, even in an anonymous survey. Several studies on the accuracy of self-reports of sexual behaviour have shown that a survey design provides lower reports of sensitive behaviours compared to several different interview techniques.^{29–30} Therefore, it is also reasonable to suggest that the number of patients actually having problems with sexual functioning is higher than the number of patients who report having problems.

Implications for clinical practice

Patients with HF, both male and female, with a partner and younger patients experience more sexual problems than healthy community-dwelling elderly people. However, a large percentage of older patients and patients without a partner also report sexual problems, and all patients attribute these problems to HF-related symptoms. These findings emphasise that sexual health needs to be discussed with all patients with HF during treatment, and should become an integral part of HF management and patient education. Healthcare providers should create an environment where patients feel comfortable enough to talk about their concerns, in the confidence that these will be addressed.

Implications for further research

Sexual problems in patients with HF are more often reported than to be expected as part of the ageing process. Further research is needed on interventions to improve sexual activity, including sexual counselling. These studies should not only address younger and male patients, but also include female and

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What is already known on this subject

- At least 50% of all patients with heart failure report their sexual activity has reduced or completely ceased as a result of their illness.
- Elderly in general experience sexual problems due to the aging process, e.g. hormonal changes independent of heart failure.

What this study adds

- Heart failure patients with a partner and patients younger than 65 years report significantly more sexual problems than healthy community controls.
- A large percentage of patients without a partner, female patients, and patients older than 65 years also report having sexual problems.
- Patients with heart failure attribute their sexual problems mostly to heart failure symptoms and are less satisfied about their sexuality compared to healthy community controls.

older patients. Furthermore, future research on pharmacological and non-pharmacological interventions should include sexual activity and sexual function, in order to gain more insight into the effects of the treatment on sexual health.

CONCLUSIONS

Patients with HF with a partner and younger patients experience significantly more sexual problems than healthy community controls. In addition, a large percentage of older patients and patients without a partner report having sexual problems, and all patients attribute these to HF-related symptoms. Therefore, healthcare providers need to discuss the possible consequences of HF, HF symptoms and HF medications on sexual health with their patients on a regular basis, in order to help patients cope with their sexual problems.

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Competing interests None.

Patient consent Obtained.

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